

Remarks

The Examiner has indicated that the previous Amendment introduced new matter into the disclosure of the invention under 35 U.S.C. § 132. Applicant has amended the specification to eliminate the objected language. In particular, the Applicant has amended the paragraph beginning at page 14, line 9, by deleting the phrase "is spaced from". As pointed out in Figure 3B and the discussion on pages 13 and 14, the partially spherical outer surfaces of each of the trunnions includes a contact surface area (shaded area in Figure 3B) engaging the spherical inner surface of the inner roller for receiving a load during rotation of the joint (*i.e.*, the load bearing surfaces of the trunnions). There is a contact surface area on opposite sides of the trunnions along the trunnion centerline (depending upon the direction of rotation of the joint, one or the other contact surface areas bears the load). The cylindrical face is inclined in such a manner as to pass through the trunnion centerline across the non-load bearing areas of the trunnion (separating the load bearing contact surface areas) in the axial direction of the trunnions (Figure 3B). As such, the inclined cylindrical face does not intersect the contact surface area so as to not cross through the trunnion centerline at the load bearing contact surface areas. This allows the inner rollers to be installed on the trunnions via the cylindrical faces passing across the non-load bearing areas of the trunnions, while preserving the functional load-bearing contact surface areas of the trunnion. In other words, the cylindrical faces do not cut significantly into the operative load-bearing contact surface areas of the trunnion so as to maintain the integrity of the joint. Having deleted the objected language and having explained the inner relation of the cylindrical face to the contact surface area, the new matter rejection under § 132 is believed overcome.

The drawings are objected to in light of the Applicant's statement from the previous Amendment that Figures 3A and 3B show a cylindrical face with a reduced/recessed diameter with respect to the spherical portion of the outer surface of the trunnion. As mentioned previously, the reduced diameters of the cylindrical faces are recessed into the partially spherical body of the trunnions. In order to form the *cylindrical* face on the partially *spherical* body, the cylindrical faces must necessarily

extend into the partially spherical outer surface of the trunnions. As such, the cylindrical face must have a reduced diameter relative to the partially spherical trunnions. The reduced diameters of the cylindrical faces is best shown in the enlarged views of Figures 4 and 5, as well as Figures 10-13. Figures 3A and 3B illustrate a more schematic view of the cylindrical faces. Applicant apologizes for any confusion this may have caused. It is noted that Figures 1A, 1B, and 2 also illustrate a substantially schematic view of the cylindrical faces.

The Examiner appears to be interpreting the spherical and cylindrical portions of the outer surface of the trunnion to be in full contact with the spherical inner surface of the inner roller. The Examiner refers to Figure 1B to illustrate this point. As mentioned above, Figure 1B is more schematic in nature. Further, this statement by the Examiner is in direct contradiction to the description of the invention as filed and engineering logic. As shown in Figure 3A, the inner roller is able to be installed onto the trunnion by aligning the inner roller coaxially with the cylindrical face. The inner roller is then guided axially over the diameter of the cylindrical face into engagement with the trunnion. The inner roller is then rotated into alignment with the spherical outer surfaces of the trunnion. In this position, shown in Figures 1B, 2, 3A, 4, 5 and 10-13, the inner roller can no longer be removed from the trunnion. Since the inner roller can be installed and later removed only when aligned with the cylindrical faces and cannot be installed or removed when aligned with the spherical outer surfaces of the trunnion, the diameters of the cylindrical faces and the spherical outer surfaces must differ. In particular, the diameter of the spherical outer surface of the trunnion must be larger than the diameter of the cylindrical face. If this was not the case, the inner roller would simply fall off or detach from the trunnion. Having explained what the drawings are illustrating and the interrelation between the cylindrical portions and the spherical outer surfaces, the objection to the drawings is believed overcome.

Claims 7 and 8 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner objects to the language that the cylindrical faces are "spaced from" the contact surface areas of each trunnion. This objected language has been removed from Claims 7 and 8 to clarify

the novelty of these claims. As discussed above in relation to the changes to the specification, Claims 7 and 8 have been amended to state that the cylindrical face does not intersect the contact surface area on each trunnion. In summary, the claim amendments to Claims 7 and 8 are believed to overcome the Section 112 rejections.

Claims 1 and 3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kudo, et al. (U.S. Patent No. 5,791,995). Claim 2 is deemed allowed. Claim 6 has been cancelled.

Applicant thanks the Examiner for the allowance of Claim 2 and, as such, new Claim 9 has been included which sets forth each of the limitations of allowed Claim 2 and base Claim 1. New independent Claim 9 is therefore believed allowable, and Claim 10, which depends from the novel features of Claim 9, is also believed allowable. Claim 1 has been amended to clarify the novelty of this claim and Claim 3 has been amended to further define the novelty of this claim.

It is respectfully submitted that the Examiner has misinterpreted the Kudo et al. patent as it relates to the claimed invention set forth in Claim 1. Applicant submits that the joint and roller assembly disclosed in the Kudo patent is more of the type disclosed in the background and in Figures 15-18 of the subject application. In particular, the Kudo patent sets forth a type of roller assembly 24, 32, 40 that includes an inner roller 32 having *cylindrical* inner and outer surfaces and an outer roller 24 similarly having *cylindrical* inner and outer surfaces. A needle bearing 40 is disposed between the cylindrical outer surface of the inner roller and the cylindrical inner surface of the outer roller. A pair of washers 44a, 44b are disposed about the needle bearings 40 to prevent relative sliding movement of the inner roller relative to the outer roller along the axis of the trunnion. This type of joint having this type of roller assembly is in stark contrast to the structure of the subject invention as set forth in amended Claims 1 and 3.

It is also noted that the cylindrical relief areas 36 shown in Figure 15 of the Kudo patent are in no way analogous to the cylindrical face of the subject invention. The relief areas shown in the Kudo patent are merely designed to retain and hold oil disposed between the trunnion and the rollers. The cylindrical face of the subject invention is designed to present and expose a diameter of the cylindrical face such that the roller

assembly can be inserted onto the trunnion about the cylindrical face. The cylindrical relief areas of the Kudo patent are in no way designed for such a function.

Amended Claim 1 requires that the inner roller have a partially spherical inner face cooperating with the spherical outer surfaces of the trunnions. Further, independent Claim 1 requires that the needle bearings allow relative sliding movement between the inner and outer rollers along the trunnion axis. This structure is not shown, described or taught by the Kudo patent. Similarly, independent Claim 3 requires that the roller assembly have an inner face that is at least partially spherical that cooperates with the spherical outer surface of the trunnions. Again, this structure is not shown, disclosed or taught by the Kudo patent.

Upon a proper interpretation of the Kudo patent, it is clear that there are significant structural differences between the joint disclosed in the Kudo patent and the limitations as set forth in independent Claims 1 and 3. As such, independent Claims 1 and 3 are believed allowable. Claims 7 and 8 are also believed allowable as these claims depend upon the unique features of independent Claims 1 and 3, respectively.

Accordingly, it is respectfully submitted that the Application, as amended, is now presented in condition for allowance, which allowance is respectfully solicited. The Commissioner is authorized to charge our Deposit Account No. 08-2789 for any fees or credit the account for any overpayment.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS, P.C.

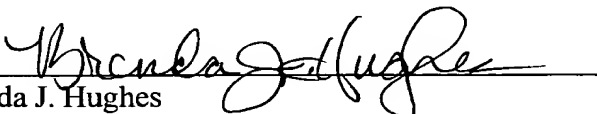
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**CERTIFICATE OF MAILING**

I hereby certify that the attached **Amendment** is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to the Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-5151, on **February 12, 2004**.


Brenda J. Hughes

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